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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,448	02/06/2004	Hideyuki Iwamura	2004-0171A	5160

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WASHINGTON, DC 20006-1021

EXAMINER

DEGHAN, QUEENIE S

ART UNIT	PAPER NUMBER
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1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/772,448

Applicant(s)

IWAMURA ET AL.

Examiner

Queenie Dehghan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 1, 5, 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. Claim 1 is objected to because of the following informalities: "sandwiching a phase adjustment section with changing the period of the said refractive index change" is poor grammar. Appropriate correction is required.
3. Claim 5 is objected to because of the following informalities: "said third light is entered to the core" is poor grammar. Appropriate correction is required.
4. Claim 8 is objected to because of the following informalities: "step further comprising a step" is poor grammar. Appropriate correction is required.
5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 8 indicates a cosine function where the transmittance is the smallest at the center, but the specification and figure 17, indicates that the transmittance is highest at the center.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim 1 is unclear as to what is meant by "changing the period of said refractive index change". Is it the same as the refractive index periodically changing?
9. Claim 2 recites the limitation "said period" in line 4. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 4 recites the limitation "between the adjacent main lobes" in line 10. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 8 is unclear as to what is meant by "these" mask.
12. Claims 14 and 15 recites the limitation "light carrier wave" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. The claims cannot be examined.
13. Claim 16 recites a product by process claims, where no positive active method steps are recited.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-3, 7, 9-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Canning et al. (5,830,622). Regarding claim 1, Canning et al. disclose a method for manufacturing an optical fiber grating comprising: a grating creation step of creating grating sections having a structure in which the refractive index periodically changes along the longitudinal direction of an optical fiber and sandwiching a phase adjustment section with the grating sections (col. 1 lines 52-55); and a phase adjustment step of adjusting the optical length of the phase adjustment section while monitoring the spectrum of the reflectance of the optical fiber grating where said grating sections and phase adjustment sections are disposed (col. 1 lines 56-58, col. 2 lines 19-26, col. 4 lines 40-42, col. 6 lines 4-7).

16. Regarding claims 2-3, 7, and 9-13, Canning et al. also disclose an optical fiber comprising a core and a cladding, where the core is made of germanosilicate (col. 3 lines 39-44). Furthermore, Canning et al. disclose irradiating a first UV light along the longitudinal direction of the optical fiber (col. 5 lines 14-56) to create grating sections, where the refractive index is increased, and a second UV light on the phase adjustment sections so as to change the refractive index (col. 5 line 63 to col. 6 line 3).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canning et al. (5,830,622) in view of Wakabayshi et al. (2002/0067889). Canning et al. disclose allowing a third light to enter the core of the fiber and observing the spectrum of the light by a light intensity measuring instrument (col. 6 lines 4-7). Wakabayshi et al. teach the step of allowing a light to enter the core of the fiber through an optical circulator, reflecting the light from the grating section of the fiber, and entering a light intensity measuring instrument through the optical circulator, and utilizing this reading to control the treatment on the fiber ([0046], [0048], [0049]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the third light, optical circulator, and light intensity measuring instrument of Wakabayshi et al. in order to monitor the irradiation effects, as suggested by Canning et al.

20. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canning et al. (5,830,622) in view of Hill et al. (5,367,588). Canning et al. fail to

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disclose the use of transmittance distribution mask. Hill et al. teach using a transmittance distribution mask with a phase grating, such that a cosine function, wherein the transmittance of the light becomes the highest at the center of the grating section and smallest at the ends of the grating section (col. 5 line 66 to col. 6 line 5, figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the transmittance distribution mask of Hill et al. in the process of Canning et al. because Hill et al. has demonstrated that it is known to do so, and in order to achieve the desired grating structure in the fiber.

Conclusion

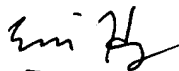
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Q Dehghan


ERIC HUG
PRIMARY EXAMINER